AMENDMENTS TO THE CLAIMS

The following is a complete listing the pending claims.

1. (Currently amended) A fluorescent nucleoside analog comprising a sugar moiety and an aromatic hydrocarbon group attached to the C1 position of the sugar moiety, wherein the aromatic hydrocarbon group is oxoperylene, phenylporphyrin, or quinacridone ~~not anthracene, phenanthrene, pyrene, stilbene, tetracene, pentacene, adenine, thymine, cytosine, guanine, or uracil~~.

2. (Original) The analog of claim 1, wherein the hydrocarbon group is attached to the C1 position of the sugar moiety by a carbon-carbon bond.

3. (Original) The analog of claim 1, wherein the hydrocarbon group is attached to the C1 position of the sugar moiety by a carbon-heteroatom bond.

4. (Withdrawn) The analog of claim 1, wherein the sugar moiety is a hexose.

5. (Withdrawn) The analog of claim 4, wherein the hexose is allose, altrose, glucose, mannose, gulose, idose, galactose, or talose.

6. (Original) The analog of claim 1, wherein the sugar moiety is a pentose.

7. (Original) The analog of claim 6, wherein the pentose is ribose, arabinose, xylose, or lyxose.

8. (Original) The analog of claim 1, wherein the sugar moiety is a reduced sugar.

9. (Original) The analog of claim 8, wherein the reduced sugar is 2-deoxyribose or 3-deoxyribose.

10. (Original) The analog of claim 1, wherein the aromatic hydrocarbon group consists of hydrogen atoms and carbon atoms.

11. (Original) The analog of claim 1, wherein the aromatic hydrocarbon group contains at least one heteroatom.

12. (Original) The analog of claim 11, wherein the heteroatom is nitrogen, oxygen, or sulfur.

13. (Withdrawn) The analog of claim 1, wherein the aromatic hydrocarbon group contains at least one substituent.

14. (Withdrawn) The analog of claim 13, wherein the substituent is a fluoro, chloro, bromo, iodo, amino, alkylamino, arylamino, hydroxy, alkoxy, aryloxy, phenyl, aryl, methyl, ethyl, propyl, butyl, isopropyl, t-butyl, carboxy, or sulfonate group.

15. (Cancelled)

16. (Withdrawn) The analog of claim 11, wherein the aromatic hydrocarbon group is dimethylaminostilbene, quinacridone, fluorophenyl-dimethyl-BODIPY, bis-fluorophenyl-BODIPY, acridine, terrylene, sexiphenyl, porphyrin, benzopyrene, (fluorophenyl-dimethyl-difluorobora-diaza-indacene)phenyl, (bis-fluorophenyl-difluorobora-diaza-indacene)phenyl, quaterphenyl, bi-benzothiazole, ter-benzothiazole, bi-naphthyl, bi-anthracyl, or ter-naphthyl.

17. (Original) The analog of claim 1, wherein the analog is an alpha isomer.

18. (Withdrawn) The analog of claim 1, wherein the analog is a beta isomer.

19. (Withdrawn) The analog of claim 1, further characterized as a trityl derivative.

20. (Withdrawn) The analog of claim 1, further characterized as a dimethoxytrityl derivative.

21. (Withdrawn) The analog of claim 1, further characterized as a phosphoramidite derivative.

22. (Original) The analog of claim 1, having an absorbance maxima of about 250 nm to about 1000 nm.

23. (Currently amended) The analog of claim ~~1~~ 22, having an absorbance maxima of about 300 nm to about 700 nm.

24. (Original) The analog of claim 1, having an emission maxima of about 300 nm to about 1200 nm.

25. (Currently amended) The analog of claim ~~1~~ 24, having an emission maxima of about 350 nm to about 950 nm.

26. (Original) The analog of claim 1, having a molar absorptivity of about 1 x 10^2 $L \bullet mol^{-1}$ cm^{-1} to about 5 x 10^8 $L \bullet mol^{-1}$ cm^{-1}.

27. (Currently amended) The analog of claim ~~1~~ 26, having a molar absorptivity of about 1 x 10^3 $L \bullet mol^{-1}$ cm^{-1} to about 1 x 10^7 $L \bullet mol^{-1}$ cm^{-1}.

28. (Currently amended) The analog of claim 1, having the chemical structure oxoperylene deoxyriboside, ~~perylene deoxyriboside,~~ phenylporphyrin deoxyriboside, or quinacridone deoxyriboside.

29. (Withdrawn) The analog of claim 1, having the chemical structure terrylene deoxyriboside, 7,15-dihexyl-terrylene deoxyriboside, fluorophenyl-dimethyl-difluorobora-diaza-indacene deoxyriboside, sexiphenyl deoxyriboside, porphyrin deoxyriboside, benzopyrene deoxyriboside, bis-fluorophenyl-difluorobora-diaza-indacene deoxyriboside, tetracene deoxyriboside, (fluorophenyl-dimethyl-difluorobora-diaza-indacene)-phenyl deoxyriboside, (bis-fluorophenyl-difluorobora-diaza-indacene)-phenyl deoxyriboside, quaterphenyl deoxyriboside, bi-anthracyl deoxyriboside, bi-naphthyl deoxyriboside, ter-naphthyl deoxyriboside, bi-

benzothiazole deoxyriboside, ter-benzothiazole deoxyriboside, or benzopyrene deoxyriboside.

30. (Original) A fluorescence quenching nucleoside analog comprising a sugar moiety and a fluorescence quenching group attached to the C1 position of the sugar moiety.

31. (Original) The analog of claim 30, wherein the analog is an alpha isomer.

32. (Withdrawn) The analog of claim 30, wherein the analog is a beta isomer.

33. (Withdrawn) The analog of claim 30, wherein the fluorescence quenching group is dimethylaminostilbene, dimethylaminoazobenzene, dimethylaniline, nitrobenzene, pentafluorobenzene, methylpyridinium, or phenyl-(methylpyridinium).

34. (Withdrawn) The analog of claim 30, having the chemical structure dimethylaminostilbene deoxyriboside, dimethylaminoazobenzene deoxyriboside, dimethylaniline deoxyriboside, nitrobenzene deoxyriboside, pentafluorobenzene deoxyriboside, methylpyridinium deoxyriboside, or phenyl-(methylpyridinium) deoxyriboside.

35. (Withdrawn-currently amended) A fluorescence insulator nucleoside analog comprising a sugar moiety and ~~an~~ a cyclic non-aromatic hydrocarbon group attached to the C1 position of the sugar moiety.

36. (Withdrawn) The analog of claim 35, wherein the hydrocarbon group contains one ring, two rings, or three rings.

37. (Withdrawn) The analog of claim 35, wherein the analog is an alpha isomer.

38. (Withdrawn) The analog of claim 35, wherein the analog is a beta isomer.

39. (Withdrawn) The analog of claim 35, wherein the hydrocarbon group is a cyclohexane group, a decalin group, a dehydrodecalin group, a tetradecahydro-

anthracene group, a dodecahydro-anthracene group, a tetradecahydro-phenanthrene group, or a dodecahydro-phenanthrene group.

40. (Withdrawn) The analog of claim 35, having the chemical structure cyclohexane deoxyriboside, decalin deoxyriboside isomer 1, decalin deoxyriboside isomer 2, dehydrodecalin deoxyriboside isomer 1, dehydrodecalin deoxyriboside isomer 2, dehydrodecalin deoxyriboside isomer 3, tricyclic deoxyriboside isomer 1, or tricyclic deoxyriboside isomer 2.

41. (Original) An oligoglycoside containing at least one fluorescent nucleoside analog of claim 1.

42. (Withdrawn) An oligoglycoside containing at least one fluorescence insulator nucleoside analog of claim 35.

43. (Currently amended) ~~An~~ The oligoglycoside of claim 41, further containing at least one fluorescence quenching nucleoside analog of claim 30.

44. (Currently amended) ~~A tetraglycoside~~ The oligoglycoside of claim 50, comprising:

1, 2, 3, or 4 of the fluorescent nucleoside analog ~~of claim 1~~;

0, 1, or 2 of the fluorescence insulator nucleoside analog ~~of claim 35~~; and

0, 1, or 2 of abasic deoxyriboside.

45. (Currently amended) The ~~tetranucleotide~~ oligoglycoside of claim 44, having the sequence 5'-DSYS, 5'-YOOY, 5'-QYYY, 5'-PSYS, 5'-QEEY, 5'-QDQE, 5'-QDYQ, 5'-QYQE, 5'-QEQE, 5'-YDQQ, 5'-YYDQ, 5'-DDYQ, 5'-QYYE, 5'-QQEY, 5'-QYYD, 5'-QYYD, 5'-QQYY, 5'-QDYY, 5'-DYED, 5'-DQEY, 5'-EYDY, 5'-EQEE, 5'-QYDD, 5'-YEEY, 5'-EEYD, 5'-DQDD, 5'-DDDY, 5'-QDQD, 5'-YDDD, 5'-YYYQ, 5'-DQQD, or 5'-EQDQ; wherein D is N,N-dimethylamino-stilbene-glycoside, S is

abasic deoxyriboside, Q is quinacridone-glycoside, Y is 1-pyrene-glycoside, O is oxoperylene deoxyriboside, P is phenylporphyrin deoxyriboside, and E is ~~3-oxoperylene-O-glycoside~~ perylene deoxyriboside.

46. (Currently amended) A method of detecting a target molecule, the method comprising:

(a) providing a target molecule;

(b) covalently attaching one or more of the fluorescent nucleoside analogs of claim 1 to the target molecule to produce a labelled target molecule;

(c) applying ultraviolet light or visible light to the labelled target molecule; and

(d) detecting light emitted from the labelled target molecule.

47. (Currently amended) The method of claim 46, wherein the target molecule is selected from the group consisting of organic molecules, DNA, RNA, peptides, proteins, antibodies, cells, lipid bilayers, membranes, micelles, transmembrane proteins, ribosomes, liposomes, nucleosomes, peroxisomes, cytoskeletal units, plastids, chloroplasts, and mitochondria.

48. (Currently amended) The method of claim 46, wherein one, two, three, or four of the fluorescent nucleoside analogs are covalently attached to the target molecule.

49. (Currently amended) The method of claim ~~46~~ 48, wherein:

the target molecule is covalently attached to 5'-DSYS, 5'-YOOY, 5'-QYYY, 5'-PSYS, 5'-QEEY, 5'-QDQE, 5'-QDYQ, 5'-QYQE, 5'-QEQE, 5'-YDQQ, 5'-YYDQ, 5'-DDYQ, 5'-QYYE, 5'-QQEY, 5'-QYYD, 5'-QYYD, 5'-QQYY, 5'-QDYY, 5'-DYED, 5'-DQEY, 5'-EYDY, 5'-EQEE, 5'-QYDD, 5'-YEEY, 5'-EEYD, 5'-DQDD, 5'-DDDY, 5'-QDQD, 5'-YDDD, 5'-YYYQ, 5'-DQQD, or 5'-EQDQ;

wherein D is N,N-dimethylamino-stilbene-glycoside, S is abasic deoxyriboside, Q is quinacridone-glycoside, Y is 1-pyrene-glycoside, O is oxoperylene deoxyriboside, P is phenylporphyrin deoxyriboside, and E is ~~3-oxoperylene-O-glycoside~~ perylene deoxyriboside.

50. (New) The oligoglycoside of claim 41, further containing at least one fluorescence insulator nucleoside analog, wherein said fluorescence insulator nucleoside analog comprises a sugar moiety and a cyclic non-aromatic hydrocarbon group attached to the C1 position of the sugar moiety.